Benhao Huang

% huskydoge.github.io

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○ https://github.com/huskydoge

EDUCATION

- **Shanghai Jiao Tong University** — Shanghai, China

  Bachelor of Engineering, Electronic Information (IEEE pilot class) — *Sept 2021 - Current*

  ‣ **Overall GPA**: 92.66/100.00, 4.04/4.30, (Rank 6/129)

  ‣ **Selected Courses**: Design and Analysis of Algorithms (A+), Principles and methods of program design (A+), Programming Practice (A+), Computer Network (A+), ⬡ **Math**: Mathematical Analysis (A+), Linear and Convex Optimization (A+), Information Theory (A+), Complex Analysis (A+), Probability Statistics (A+)

  ‣ **Note**: Pursued a one-year dual degree in Mathematics and Applied Mathematics (discontinued). Completed courses include Complex Analysis, Abstract Algebra, Linear Algebra II.

- **Zhejiang Ruian High School** — Zhejiang, China

  High School Diploma, Experimental Class — *Sept 2018 - July 2021*

PUBLICATIONS

- **Defining and Extracting Generalizable Interaction Primitives from DNNs** (In submission)

  *Lu Chen, Siyu Lou, **Benhao Huang**, Quanshi Zhang* — *SJTU XAI-Lab*

  ○ Given different DNNs trained for the same task, we develop a method to extract their shared interactions.

  ○ Experiments show that these shared interactions extracted are reliable instead of noise.

EXPERIENCE

- **XAI-Lab, SJTU** — Shanghai, China

  Undergraduate researcher, supervised by Prof. Quanshi Zhang. — *Feb 2023 - Current*

  ☰ Artificial Intelligence Interpretability

PROJECTS

- **Adaptive Huffman Coding: Analysis and Applications** — Shanghai, China

  ICE2601 Information Theory Course Project — *May 2023*

  ○ An Exploration of Adaptive Huffman Coding. I was responsible for the theoretical exploration of adaptive Huffman coding and the attempt to apply adaptive Huffman coding to incremental learning in the CBOW model. ○ GitHub ⬇ Report ⓟ PPT

- **Shanghai Jiao Tong University Classroom Information Website** — Shanghai, China

  ICE2604 Introduction to Software Engineering Course Project — *Dec 2022*

  ○ A website designed to display classroom data such as seat number, CO2 concentration, temperature, etc. It aims to help student choose a proper self-study classroom. I was responsible for the whole development of the front and back of the website. ○ GitHub ⊞ Video

- **Snake Game: Pixel** — Shanghai, China

  CS1605 Programming and Practice Course Project — *July 2022*

  ○ Snake Game implemented with C++ pdcourses.lib. I was responsible for completing the basic mechanics of the game, the design and implementation of game props and AI Snake mode. ○ GitHub ⓟ PPT ⊞ Video

POSITIONS OF RESPONSIBILITY

- Member of the Outreach Department, SJTU Spark Program — *Oct 2021 - Sept 2022*
- Member of Academic Department, SJTU Student Backbone Training Program — *Feb 2023 - Sept 2023*

SKILLS SUMMARY

- **Proficient**: Python (PyTorch, NumPy, pandas, etc.), C/C++, Linux, Shell (Bash/Zsh), LaTeX etc.
- **Familiar**: MATLAB, HTML/CSS, JavaScript, Vue/, etc.

HONORS AND AWARDS

- Academic Excellence Scholarship of SJTU (top 10%) — *2021/2022*
- Shao Qiu scholarship(10000 ¥, Rank 5/129) — *2021*